

REMARKS

A. Background

Claims 1 and 3-15 were pending in the application at the time of the Office Action. Claims 1 and 3-15 were rejected as being obvious over cited art. By this response applicant has cancelled claims 3 and 6; amended claims 1, 12, and 13; and added new claim 16. As such, claims 1, 4, 5, and 7-16 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

Applicant has herein amended claims 1, 12, and 13 and added new claim 16 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. For example, claim 1 has been amended to incorporate the limitations of claims 3 and 6. The remaining amendments to the claims are supported by Figure 2. In view of the foregoing, applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

C. Rejections on the Merits

Paragraph 1 of the Office Action rejects claims 1 and 3-15 as being indefinite on grounds that the claims recite a sealed chamber when in fact the chamber communicates through the filter opening. Applicant has herein amended claims 1 and 12 to recite that the chamber is sealed "except for communication through the breather filter." The remaining claims were simply rejected for depending from claim 1. In view of the foregoing, withdrawal of the rejection is respectfully requested.

Page 2 of the Office Action rejects claims 1 and 3-12 under 35 USC § 103(a) as being obvious over U.S. Patent No. 6,824,595 to Ueki et al. ("*Ueki*") in view of U.S. Patent No. 4,254,339 to Urano ("*Urano*"). Applicant respectfully traverses this rejection and asserts that it would not be obvious to combine the

references as asserted in the Office Action and that even if the references were combined, the combination would not produce the invention as recited in the claims. Of the rejected claims, claims 1 and 12 are the sole independent claims.

As shown in Figures 3 and 4, *Ueki* discloses a gas adsorption filter 11 for mounting on an air tight container 17. Gas adsorption filter 11 comprises “an adsorbent 13 ... provided on one side of a base 12, and the adsorbent 13 is covered by a breathable member 14 to form an adsorbent unit.” Col. 5, lines 17-19. More specifically, base 12 is formed with a collar 15 so that it can be securely fitted into a mounting hole on airtight container 17. Adsorbent 13 is secured to an inside face of base 12 so that when base 12 is mounted on container 17, adsorbent 13 is disposed toward the compartment of container 17. Breathable member 14 covers adsorbent 13 so that breathable member 14 can serve its intended function of “preventing the shedding of the adsorbent.” Col. 7, lines 21 and 22. As a result of breathable member 14 covering adsorbent 13, breathable member 14 is positioned between adsorbent 13 and the compartment of container 17.

Ueki discloses that base 12 is only used to hold the shape gas adsorption filter 11 and thus can be made of plastic, metal or glass or the like. See col. 6, lines 24-37. As such, the base 12 is not a stage of the *Ueki* filter. Thus, gas adsorption filter 11 only includes two filter stages: the breathable member 14 and the adsorbent 13.

While the breathable member 14 disclosed in *Ueki* may arguably read on the porous membrane of the present invention, there is no disclosure in *Ueki* of using two other separate filter stages. That is, while *Ueki* disclose using activated carbon and silica gel, *Ueki* only discloses using these components as alternatives to each other or as combined in the single adsorbent 13. For example, *Ueki* states that “[t]he adsorbent 13 can be any material that has adsorption properties ... such as silica gel, activated carbon, ...” Col. 6, lines 44-46. This implies a single adsorbent. *Ueki* further states that “[u]sing a combination of activated carbon and silica gel makes it possible to obtain an adsorbent that combines moisture control functions with an ability to

adsorb noxious gases.” Col. 6, lines 63-66, emphasis added. As is clear from this passage, *Ueki* is only referring to using a combination of activated carbon and silica gel in the single adsorbent 13, not as separate stages in the filter.

The Office Action acknowledges that *Ueki* does not disclose an “activated carbon” filter stage and a separate “silica gel” filter stage, as recited in claims 1 and 12. To address this deficiency, the Office Action cites *Urano* for teaching a silica gel filter 46 and a separate carbon filter 45. The Office Action states that “[i]t would have be obvious to one of ordinary skill in the art at the time of the invention to substitute the *Ueki* absorbent filter with the *Urano* separate filters in specific order because the substitution of one known element for another would have yielded predictable results of filtering the air.” Office Action, page 4.

Initially, applicant submits that it would not have been obvious to modify *Ueki* based on *Urano*. *Urano* is directed to a method for the fluorimetric quantitative determination of SO₂ in gases and has no relationship to sophisticated filters that can be used in the air inlet of electrical equipment such as computers and lighting. Accordingly, although *Urano* teaches the concept of using a separate silica gel filter and carbon filter in an unrelated technology, there is no rational basis or underpinning, as required under *KSR*, as to why one skilled in the art would modify *Ueki* based on *Urano*. Furthermore, as discussed above, *Ueki* specifically teaches that “[u]sing a combination of activated carbon and silica gel makes it possible to obtain an adsorbent that combines moisture control functions with an ability to adsorb noxious gases.” Accordingly, because *Ueki* specifically teaches combining the two materials to obtain a single unique adsorbent, *Ueki* teaches away from dividing the materials into two separate filters.

Furthermore, even if the references were combined, the combination would still not produce the claimed invention. For example, as discussed above, breathable member 14 covers adsorbent 13 so that breathable member 14 is positioned between adsorbent 13 and the compartment of container 17. Because this covering by breathable member 14 is used to prevent the “shedding of the absorbent,” this “covering” would

still occur even if adsorbent 13 was comprised of two separate filters. Accordingly, even if the references were combined as suggested in the Office Action, the combination would not produce filter stages where the **"porous membrane is positioned adjacent the air inlet, the silica gel is positioned adjacent the outlet, and the activated carbon is positioned between the porous membrane and the silica gel,"** as recited in claim 1. That is, in the combination, the porous membrane would be positioned adjacent the outlet so that it could cover the silica gel.

Similarly, because the silica gel is covered by the porous membrane, *Ueki* clearly does not disclose or suggest but rather teaches away from the silica gel being **"openly exposed to the chamber,"** as recited in claim 16. Here it is noted that *Urano* also does not disclose or suggest the silica gel being positioned "adjacent" or "openly exposed" to the chamber in that capillary 47 and ozonizer 48 are positioned between silica gel filter 46 and chamber 24.

Applicant further submits that the positioning of the different filter stages is not arbitrary but produces unique benefits. For example, as discussed in the specification, the inventive filter is designed to produce a two way flow of air through the filter stages that minimizes the flow of humidity and particulate into the filter housing and optimizes driving humidity out of the chamber and the silica gel. That is, placing the porous membrane at the air inlet minimizes the amount of moisture and particulate that can initially enter the airflow passageway and thus limits that amount of moisture that must be adsorbed by the silica gel. In contrast, placing that porous membrane at the outlet, as taught by the prior art, restricts the flow of moisture out of the chamber which is contrary to the intended object of the present invention. Furthermore, by placing the silica gel adjacent to the chamber, the silica gel is exposed to the greatest thermal heat produced by the electrical apparatus within the chamber. Maximizing the applied heat to the silica gel optimizes the amount of humidity that can be driven out of the chamber past the silica gel and maximizes the amount of humidity that can be driven out of the silica gel, thereby decreasing humidity within the chamber.

In view of the foregoing, Applicant submits that claim 1 is not obvious over the cited prior art and withdrawal of the rejection is respectfully requested.

Claims 4, 5, and 7-11 depend from claim 1 and thus incorporate the limitations thereof. As such, applicant submits that claims 4, 5, and 7-11 are distinguished over the cited art for at least the same reasons as discussed above with regard to claim 1. Accordingly, Applicant respectfully requests that the rejection with respect to claims 4, 5, and 7-11 also be withdrawn.

For substantially the same reasons as discussed above with regard to claim 1, applicant submits that claim 12 is also not obvious over the cited prior art. Specifically, applicant asserts that the cited prior art does not disclose or suggest the following as recited in claim 12:

a plurality of sequential filter stages disposed within the airflow passageway, the filter stages being separate from each other, the filter stages comprising the following separate stages:

- a) a porous membrane,
- b) activated carbon, and
- c) silica gel, **the silica gel being disposed adjacent to and openly exposed to the chamber.**

In view of the foregoing, withdrawal of the rejection of claim 12 is also requested.

Page 4 of the Office Action rejects claims 13-15 under 35 USC § 103(a) as being obvious over U.S. Patent No. 5,406,467 to Hashemi ("*Hashemi*") in view of *Ueki* and *Urano*. Claims 13-15 depend from claim 1 and thus incorporate the limitations thereof. *Hashemi* relates to a simple method to produce a convoluted or torturous air channel from a molded part inserted into a rubber tube. The aim is to provide an extended diffusion channel similar to the capillary air channel disclosed in *Ueki*. However, the filter in this disclosure is a simple foam plug. No absorptive action is anticipated nor suggested to occur in the filter. There is also no disclosure of using absorptive media in the filter. In view of the foregoing, applicant submits that *Hashemi* does not cure the above discussed deficiencies of the prior art relative to claim 1. As such, applicant submits

that claims 13-15 are also not obvious over the prior art for at least the same reasons as discussed above with regard to claim 1.

No other objections or rejections are set forth in the Office Action.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1, 4, 5, and 7-16 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Finally, the Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this 16th day of September 2010.

Respectfully submitted,

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